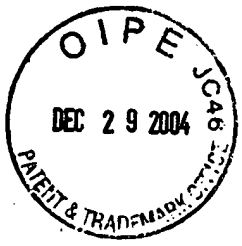
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Application No.:	10/697,671
Applicant:	John H. Harrison and J. Howard Harrison
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Application No. 10/697,671
Response to Notice of Non-Compliant Amendment dated December 22, 2004
Prepared in reply to *Notice of Non-Compliant Amendment (37 CFR 1.121)* of December 6, 2004

CLAIMS

We claim:

Claim 1 (original). A real-time path-directed controller for navigating an object along a desired path, said controller comprising:

(a) a position sensor, said position sensor producing an object position signal to an object position signal conditioning module, said object position signal conditioning module producing a conditioned object position signal to a controller summer;

(b) a heading conditioning module, said heading conditioning module receiving the object position signal and conditioning the object position signal to produce a conditioned heading signal to the controller summer;

(c) a control apparatus sensor, said control apparatus sensor producing a control apparatus signal to a control apparatus signal conditioning module, said control apparatus signal

conditioning module producing a conditioned control apparatus signal to the controller summer; and

(d) a controller summer summing the conditioned object position signal, the conditioned heading signal, and the conditioned control apparatus signal to produce a controller summer signal to a controller summer conditioning module so as to produce a control apparatus control signal to a control apparatus controller so as to direct the control apparatus and thereby direct the object by feedback control along the desired path.

Claim 2 (original). The real-time path-directed controller of claim 1 wherein poles associated with the controller are selected in accordance with a linear multiplicative-integrative object dynamic model.

Claim 3 (original). A real-time path-directed controller for navigating an object along a desired path, said controller comprising:

(a) a position sensor, said position sensor producing an object position signal to an object position signal conditioning module, said object position signal conditioning module producing a conditioned object position signal to a controller summer;

(b) a heading conditioning module, said heading conditioning module receiving the object position signal and conditioning the object position signal to produce a conditioned heading signal to the controller summer;

(c) a control apparatus sensor, said control apparatus sensor producing a control apparatus signal to a control apparatus signal conditioning module, said control apparatus signal conditioning module producing a conditioned control apparatus signal to the controller summer;

(d) a control apparatus null position conditioning module, said control apparatus null position conditioning module conditioning a distance-differentiated object position signal and conditioned control apparatus signal to produce a conditioned null position signal to the controller summer; and

(e) a controller summer summing the conditioned object position signal, the conditioned heading signal, the conditioned control apparatus signal, and the conditioned null position signal to produce a controller summer signal to a controller summer conditioning module so as to produce a control apparatus control signal to a control apparatus controller so as to direct the control apparatus and thereby direct the object by feedback control along the desired path.

Claim 4 (original). The real-time path-directed controller of claim 3 wherein poles associated with the controller are selected in accordance with a linear multiplicative-integrative object dynamic model.

Claim 5 (original). The real-time path-directed controller of claim 1 wherein the controller is configured to operate in a multi-mode manner of operation.

Claim 6 (original). The real-time path-directed controller of claim 3 wherein the controller is configured to operate in a multi-mode manner of operation.

Claim 7 (canceled)